

Application No.: 09/817,843

Docket No.: 20135-00310-US

REMARKS

Claims 1-3, 17-21 and 35-37 are now pending in this application. Claims 1 and 17 are independent. Claims 4-16 and 22-34 have been canceled, and dependent claims 35-37 have been added by this amendment. Applicants reserve the right to pursue the subject matter of canceled claims 4-16 and 22-34 in a divisional application. No new matter is introduced by any amendment to this application.

Rejection Under 35 U.S.C. § 112, Second Paragraph

Claim 9 stands rejected under 35 U.S.C. § 112, second paragraph as being indefinite. Applicants respectfully traverse.

Claim 9 has been canceled, rendering this rejection moot.

Rejection Under 35 U.S.C. § 102(e)

Claims 1-3, 9 and 17-21 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Elenius et al. (US 6,441,487). Applicants respectfully traverse.

Applicants note that anticipation requires the disclosure, in a prior art reference, of each and every limitation as set forth in the claims.¹ There must be no difference between the claimed invention and reference disclosure for an anticipation rejection under 35 U.S.C. §102.² To properly anticipate a claim, the reference must teach every element of the claim.³ "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference".⁴ "The identical invention must be shown in as complete detail as is contained in the ...claim."⁵ In determining anticipation, no claim limitation may be ignored.⁶

Regarding claim 1, the Examiner cites Elenius figures 1 and 2 as showing an electronic

¹ *Titanium Metals Corp. v. Banner*, 227 USPQ 773 (Fed. Cir. 1985).

² *Scripps Clinic and Research Foundation v. Genentech, Inc.*, 18 USPQ2d 1001 (Fed. Cir. 1991).

³ See MPEP § 2131.

⁴ *Verdegaal Bros. v. Union Oil Co. of Calif.*, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987).

⁵ *Richardson v. Suzuki Motor Co.*, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).

⁶ *Pac-Tex, Inc. v. Amerace Corp.*, 14 USPQ2d 187 (Fed. Cir. 1990).

Application No.: 09/817,843

Docket No.: 20135-00310-US

package comprising a dielectric substrate 22 having a major surface (top surface) and a conductive foil 30 having a smooth portion laminated to the dielectric substrate 22 major surface.

Applicants traverse on the ground that element 22 in Elenius is not a "substrate." Instead, element 22 of Elenius is a "wafer passivation layer."⁷ The wafer passivation layer is described as "applied over the front surface of semiconductor wafer 14."⁸ These elements are shown in figure 2 of Elenius. The wafer passivation layer 22 therefore cannot correspond to the "dielectric substrate" recited in claim 1.

The Examiner equates the redistribution trace 30 of Elenius with the "conductive foil" recited in claim 1. Claim 1 requires that the conductive foil be "laminated to said major surface" of the substrate. By contrast, Elenius' redistribution trace 30 is formed over the wafer passivation layer 22, and is not laminated to a major surface of the wafer 14. The invention recited in claim 1 therefore differs from Elenius, and the rejection is improper.⁹

Regarding claim 17, the Examiner states that Elenius discloses a semiconductor substrate 12 having a major surface, a first mechanically compliant dielectric layer 22, a first contact pad 18, a second compliant dielectric layer 24, a mask layer 32, and a solder ball 28.

Claim 17, as amended, recites a "second electrical contact pad formed in said second opening and extending over a portion of said first electrical contact pad and contacting said first electrical contact pad..."

By contrast, Elenius discloses a conductive bond pad 18 that is remote from the solder bump pad 26 (see figure 2 of Elenius). Therefore, Elenius does not disclose a second contact pad as recited in amended claim 17.

Further, claim 17 recites a "first mechanically compliant dielectric layer." Elenius is silent as to the mechanical properties of the dielectric layer 24.

Elenius therefore fails to disclose the combination of elements recited in either of claims 1 or 17, and the rejection under 35 U.S.C. § 102(e) should be withdrawn.

⁷ See lines 20-22 of column 6 of Elenius.

⁸ *Id.*

⁹ See *Scripps Clinic and Research Foundation*, 18 USPQ2d 1001.

Application No.: 09/817,843

Docket No.: 20135-00310-US

Rejection Under 35 U.S.C. § 102(b)

Claim 10 stands rejected under 35 U.S.C. § 102(b) as being anticipated by Applicants' admitted prior art. Applicants respectfully traverse.

Claim 10 has been canceled, rendering this rejection moot.

Newly-Presented Dependent Claims 35-37

Newly-presented dependent claims 35-37 have been drafted to avoid the applied art, and are submitted as being patentable in their own right, as well as on the allowability of the independent claim from which they ultimately depend. Consideration and allowance of claims 35-37 is requested.

Conclusion

In light of the above amendments and remarks, independent claims 1 and 17 define over the patents cited by the Examiner. The dependent claims are allowable due to their dependence upon an allowable independent claim, and for further patentable features recited therein. Accordingly, the Examiner is respectfully requested to withdraw the outstanding rejections of the claims and to pass the application to issue.

Attached hereto is a marked-up version of the changes made to claim 17 by this amendment. Although no fees are believed to be due with this amendment, the Director is hereby authorized to charge any fees, or credit any overpayment, associated with this communication, including any extension fees, to CBLH Deposit Account No. 22-0185.

Respectfully submitted,
CONNOLLY BOVE LODGE & HUTZ, LLP

By Larry J. Hume
Larry J. Hume

Registration No.: 44,163

1990 M Street, N.W., Suite 800
Washington, DC 20036-3425

(202) 331-7111
(202) 293-6229 (Fax)

Attorneys for Applicant

FAX RECEIVED

FEB 19 2003

Encl: Version with Marking to Show Claim
Changes made

TECHNOLOGY CENTER 2800

Application No.: 09/817,843

Docket No.: 20135-00310-US

Version with Marking to Show Claim Changes Made

Amendments to claim 17:

17. A springboard contact pad – laminate surface contact structure comprising:

- a semiconductor substrate having a major surface;
- a first mechanically compliant dielectric layer formed over said major surface of said substrate and having at least one first opening formed therethrough;
- a first electrical contact pad formed in said first opening and in electrical contact with said substrate;
- a second mechanically compliant dielectric layer formed over said first compliant layer and having at least one second opening formed therethrough wherein said second opening is substantially offset from said first opening;
- a second electrical contact pad formed in said second opening and extending over a portion of said first electrical contact pad and contacting [in electrical contact with] said first electrical contact pad;
- a mask layer formed over said second compliant layer and having a third opening therethrough in communication with said second electrical contact pad; and
- a solder ball solderably connected to said second electrical contact pad and extending through said third opening.

FAX RECEIVED

FEB 19 2003

TECHNOLOGY CENTER 2800